

G.M. DE ROUGEMONT (*)

11TH CONTRIBUTION TO THE KNOWLEDGE OF STENINAE:
THREE NEW SPECIES FROM BURMA

(COLEOPTERA STAPHYLINIDAE)

In 1982 I had the good fortune to spend a few hours collecting at the hill station of Kalaw in the South Shan States of Burma. Most of this part of the Shan plateau, which lies at an average altitude of 1200 to 1300 metres, today presents a dismal landscape of intense cultivation and grazing, but in the few places where the natural vegetation subsists, even as secondary growth, the insect life is very rich. The site which I prospected is a narrow wooded stream valley leading from the reservoir which supplies the town; half an hour spent there on the 31st of January and three hours on the 19th of March yielded more than 100 species of Staphylinidae, including no fewer than 30 species of Steninae. Most of these were known from the material (kept in this museum) collected by Leonardo Fea at similar altitudes in the Karen Hills (now a part of Kayah State), some of which I recently re-discovered at Taunggyi, the capital of South Shan States, but three of them proved to be new. One, *Stenus rougemonti* Puthz was described separately; the other two and a further new species from other localities in the Shan States are described here.

The Holotypes of the new species have been deposited in the Museo Civico di Storia Naturale in Genova; Paratypes remain in the author's collection and in Coll. Puthz. Following the practice in previous papers, the units of measurements are, excepting those of total body length which are given in mm, equal to 0.025 mm, due to the limitations of equipment used.

I thank my colleague Dr. Volker Puthz for sending me the Malaysian exx. of one of the new species described below.

(*) 27 Walcot Square, London SE 11.

Stenus (Parastenus) jaccoudi n. sp.

This new species is closely related to *S. notatipennis* Puthz, and as such easily separated from the many other maculate *Parastenus* species of the Orient.

Length: 5.3-5.9 mm. Convex, black with a very slight brassy tinge, shiny despite strong microsculpture; labrum and all appendages testaceous, the knees and antennae gradually infuscate from 5th segment; each elytron with a large orange spot.

Head considerably narrower than the elytra (77:88); the frons (average distance between eyes: 43) is bi-sulcate, the external portions not strongly reflexed, but the median portion, which is much broader than the lateral parts, is broadly raised to well above the level of the eyes (seen in profile); the punctuation of the upper surface of head is moderately coarse, not rugose, the interstices more than half the diameter of punctures and never confluent; the diameter of punctures is about equal to the section of third antennal segment. Antennae moderate, short of the posterior margin of pronotum when reflexed.

The pronotum is elongate (69:61), broadest at the middle, sinuate in posterior half and irregularly narrowed anteriorly, its surface uneven with a distinct median furrow which in some cases (Holotype) lacks a few punctures at its centre; the punctuation is coarser and a little closer than that of head.

Elytra imperceptibly transverse (88:86), their broadest point about 2/3rds from the anterior border, their surface fairly even excepting a slight juxtasutural depression and a longitudinal depression on each side just before the lateral declivity of each elytron; the punctuation is similar to that of pronotum. Each elytron bears a large orange spot which is variable in extent and shape: in the Holotype it is very large, occupying most of the posterior 2/3rds of discs, slightly transverse and narrowed laterally where it extends almost to the margin; in some other exx. the spot is much reduced, more transverse, and distinctly constricted at the level of the lateral longitudinal depression which transects it.

The abdomen is sub-elliptical in section, moderately tapered, the tergites convexe; the borders are narrow, the paratergites on anterior segments about as broad as the third antennal segment, distinct and entire on all segments, and bearing a single row of punctures; the punctuation of tergites is moderate, the diameter of punctures and of

the interstices about as great as that of eye-facets; the whole abdomen excepting the ninth and genital segments covered in fairly dense and long part white part yellowish pubescence; the male ninth sternite and female valvifers have one or two smaller teeth external to the main apico-lateral tooth, and a series of smaller teeth between the latter.

Legs moderate, the metatarsi about 5/8ths the length of tibia; first tarsal segment slightly longer than the two following together; all fourth tarsal segments strongly bilobed.

Male: Legs and abdominal sternites III to VI without sexual characters; sternite VII more densely punctate-pubescent on median axis; sternite VIII with an acute triangular apical excision to 1/7th of its length. Aedeagus: Fig. 1A.

Female: spermatheca: Fig. 1C.

Variability: The median furrow of the pronotum and the lateral longitudinal furrows of the elytra are variable in depth, even among exx. from the same locality, as is the shape and extent of the elytral spot, although the Malaysian exx. have markedly smaller and more transverse spots than any of the Burmese specimens. The former also appear more shiny, due to feebler microsculpture, than the Burmese exx.

♂ Holotype, 1 ♂ & 1 ♂ Paratypes: Burma, S.S.S., Kalaw, under heaped boulders on shaded stream bank, 31.I.1982, G. de Rougemont; 2 ♂♂ & 2 ♀♀ Paratypes: Ibid., 19.III.1982, G. de Rougemont; 1 ♀ Paratype: Burma, N.S.S., Maymyo, Wetwun Cascades, 8.XI.1980, G. de Rougemont; 1 ♂ Paratype: Malaysia, Pahang, Cameron Highlands, 26.III.1977, T. Jaccoud; 1 ♀ Paratype: Malaysia, Kampong, 1450 m., 21.I.1981, T.-E. Leiler.

In PUTHZ' key to the maculate *Parastenus* of the Orient (1981) *S. jaccoudi* n. sp. falls between *S. stigmaticus* Fv. which it does not closely resemble, and *S. notatipennis* Puthz, agreeing with neither in the shape and size of the elytral spots. It is closely related to *S. notatipennis* with which, together with *S. perroti* Puthz and another recently described species from N. Thailand, *S. grandimatrix* Rougemont, it forms a small phyletic group distinguished from other maculate *Parastenus* species by the combination of size, lateral denticulation of the ninth sternite, narrow head with prominent frons, and narrow abdominal borders (but distinct and entire, in contrast to the obsolescent borders of members of the *gestroi* group, *S. feae* Fv., *S. dentellus* Bck. and others).

The large elytral spots will at once distinguish the new species from the three others of this group, which have small round spots never exceeding 1/4th the length of the elytra; the insect is also more slender in build than the others, with narrower head and elytra. From *S. notatipennis* which it most closely resembles it further differs by the shorter first tarsal segments. The spermatheca and aedeagus are characteristic, the apex of the median lobe being narrower than that of *S. notatipennis*, but not acuminate as in *S. perroti* Puthz.

The present records, all from altitudes between 1000 and 2000 m, but in very different climatic zones that do not usually support the same montane humicolous fauna, indicate that *S. jaccoudi* n. sp. certainly occurs in Thailand, and probably in a much vaster range in S.E. Asia.

Stenus (« Hypostenus ») dentelloides n. sp.

This new species belongs to the *guttalis* group, and although well defined by the aedeagus and the conformation of the ninth sternite, is virtually indistinguishable in facies, proportions, sculpture etc. from other maculate species of that group and from many narrow-bordered *Parastenus* species. For this reason, especially considering the variability of proportions, a detailed description would be of no value for its determination, and therefore only essential diagnostic features will be described.

Length: 5.3-6.3 mm. Facies of the *gestroi* and *guttalis* groups, *S. dentellus* Bck., etc., convex with cylindrical abdomen, very large eyes, coarse rugose punctuation of fore-body, and obsolete abdominal borders. Black, the palpi and legs testaceous, the knees slightly darkened; antennae darker testaceous, progressively infuscate; each elytron with a small round orange spot.

The *guttalis* group, which I believe to be more closely related to some of the *Parastenus* species which they so resemble than to any known *Hypostenus* species, may be recognised by the presence of pre-apical spurs on the male meso- and metatibia. Among the six mainland species of this group, for which I have recently (in press) given a key, one, *S. aestivalis* Rougemont is distinguished by the conformation of the ninth sternite and the female valvifers: the apico-lateral angles are prominently rounded and finely denticulate in contrast to the single stout apico-lateral tooth seen in the other species and in similar *Para-*

stenus taxa. The new species shares this particularity, and so it is only with *S. aestivalis* Rougemont that it may be confused. The aedeagus (Fig. 2A) is characteristic, the internal structures clearly showing its affiliation to the *guttalis* group. Single females however must be more difficult to identify; the only constant morphological difference between the two species that I have found is the slightly shorter first metatarsal segment of *S. dentelloides* n. sp. (12-13; *S. aestivalis*: 16-17). Dissection of several females of both species did not reveal a sclerotised sperma-

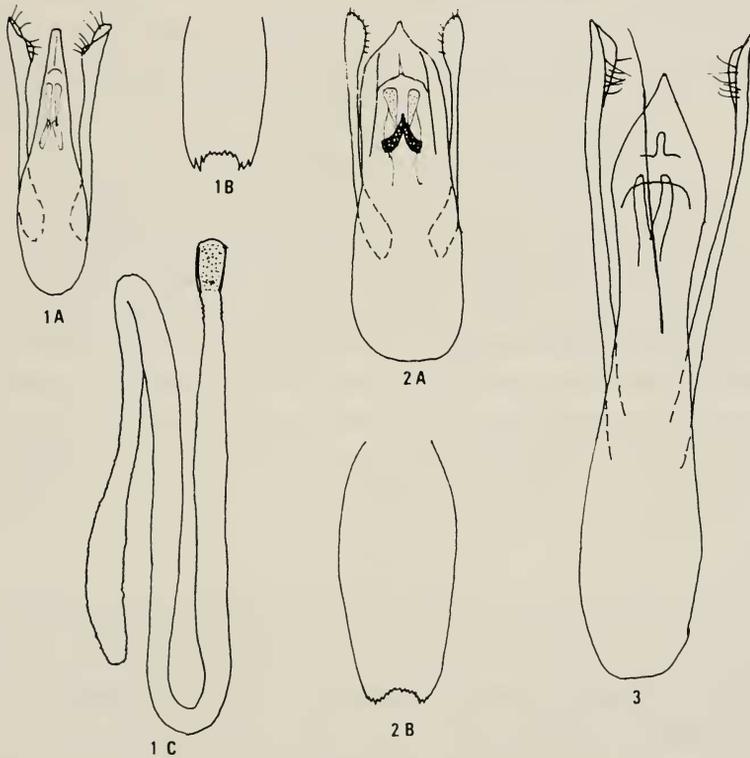


Fig. 1: *Stenus (Parastenus) jaccoudi* n. sp. - A: aedeagus, ventral view; B: outline of male ninth sternite; C: spermatheca ($2\frac{1}{2} \times$ greater enlargement).

Fig. 2: *Stenus (Parastenus) dentelloides* n. sp. - A: aedeagus, ventral view; B: outline of male ninth sternite.

Fig. 3: *Stenus (Hypostenus) amenous* n. sp., aedeagus, ventral view.

theca such as exists in similar *Parastenus* species, although a very simple visible spermatheca has been found in another member of the *guttalis* group, *S. variipennis* Rougemont.

♂ Holotype & 1 ♀ Paratype: Burma, N.S.S., Anisakan waterfalls, near Maymyo, clinging to undersides of dead teak leaves on moist forest floor, 16.I.1981, G. de Rougemont; 2 ♂♂ Paratypes: Wetwun Cascades, near Maymyo, in vegetable litter on stream bank, 28.I.1982, G. de Rougemont; 3 ♂♂ & 2 ♀♀ Paratypes: S.S.S., Kalaw, 19.III.1982, G. de Rougemont.

Despite the external morphological similarity between *S. aestivalis* Rougemont and *S. dentelloides* n. sp., the distinctive aedeagus of each taxon leaves no doubt about their full specific status. The records, each from different areas in Burma and N. Thailand, suggest that they may be allopatric, in which case other closely related taxa may be expected to occur in other mountainous areas of the Indo-chinese Sub-Region.

***Stenus (Hypostenus) amoenus* n. sp.**

Stenus amoenus L. Bck. has been reported from a wide range in the Orient (N. India and Ceylon to Thailand and China), but recent studies by Puthz and myself have resulted in the descriptions of four other closely related species. (*) Records of *S. amoenus* Bck. should be checked against these, bearing in mind that further new forms certainly await discovery. The present new taxon should probably be regarded as geographical subspecies of *S. amoenus* Bck., but as a method consistent with my recent description of *S. aneomus* from Borneo, I consider it preferable to give it the same status as other members of the group, until more material is discovered which may provide the basis for a revision.

S. amoenus n. sp. resembles *S. amoenus* Bck. more closely than it does other members of the group, differing only by its averagely slightly smaller size and larger elytral spots, but especially by its finer and much closer punctuation of the fore-body. The aedeagus (fig. 3) has proportionately longer parameres and a more acute apex of the median lobe. In both the aedeagus and the characters of the male abdominal sternites the new species is almost indistinguishable from the Bor-

(*) *S. amoenulus* and *S. lorifer* Puthz 1982, *S. aluamoenus* Rougemont 1981 and *S. aneomus* Rougemont in litt.

near *S. aneomus* Rougemont; however, as pointed out in my diagnosis of that species, the types of punctuation of each taxon lie at opposite ends of the range shown within the group, being closest in the new species and most sparse in *S. aneomus*. This, combined with the new species' large elytral spots, makes these two taxa the least similar in external appearance. The closer punctuation of the fore-body also serves to distinguish *S. amenous* n. sp. from the three remaining species of the group, which in addition differ by having more prominent and coarsely denticulate apico-lateral angles of the ninth sternite, and characteristic aedeagi and male secondary sexual modifications of the sternites.

♂ Holotype, 1 ♂ & 4 ♀♀ Paratypes: Burma, N.S.S., Wetwun Cascades, near Maymyo, swept from riverine vegetation, 28.I.1982, G. de Rougemont; 22 ♂♂ & ♀♀ Paratypes: S.S.S., Pindaya, swept from vegetation at edge of lake, 30.I.1982, G. de Rougemont; 4 ♀♀: S.S.S., Taunggyi, 1.I & 6.IV.1980, 30.I.1982, G. de Rougemont.

In support of the view of *S. amenous* n. sp. as a distinct taxon is the homogeneity of exx. from such distant localities as Maymyo, Pindaya and Taunggyi. The exx. from the latter locality have not, for want of males, been designated Paratypes, although I am in no doubt that they belong to this species; they include the exx. listed under *S. amoenus* Bck. in my earlier paper (1981A): Benick's species should therefore be temporarily deleted from the list of Burmese Steninae; if it occurs in that country it should be searched for in the lowlands or in other mountain ranges, as it would appear that *S. amenous* n. sp. is its endemic representative on the Shan plateau.

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RIASSUNTO

Nel quadro di una serie di studi intrapresi sugli Stafilinidi del Sud-Est asiatico, l'A. descrive tre nuove specie della sottofamiglia Steninae raccolte nella regione Shan della Birmania.

RESUMÉ

Dans le cadre d'une série d'études qu'il a entrepris sur la faune staphylinidienne du Sud Est asiatique, l'auteur décrit ici trois espèces nouvelles de la sous-famille Steninae qu'il a récolté lui-même dans le pays Shan de Birmanie.
